Elektronische Bauelemente

MBR2040D1~MBR20200D1

Voltage 40V~ 200V

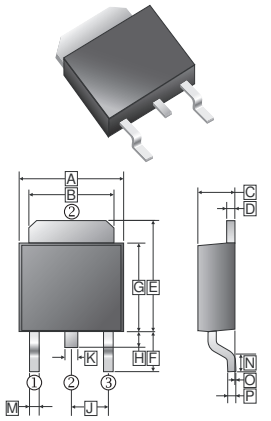
20.0 Amp Schottky Barrier Rectifiers

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

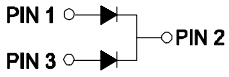
FEATURES

- Plastic package has underwriters laboratory Flammability classification 94V-0
  Flame retardant epoxy molding compound
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications

TO-252(D-PACK)



REF.	Millimeter Min.	Millimeter Max.	REF.	Millimeter Min.	Millimeter Max.
A	6.3	6.9	J	2.3 REF.	
B	4.95	5.53	K	0.89 REF.	
C	2.1	2.5	M	0.45	1.14
D	0.4	0.9	N	1.55 Typ.	
E	6	7.7	O	0	0.15
F	2.90 REF		P	0.58 REF.	
G	5.4	6.4			
H	0.6	1.2			



MECHANICAL DATA

- Case: TO-252(D-Pack) Molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: As Marked
- Mounting position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13' inch

ORDER INFORMATION

Part Number	Type
MBR2040D1~MBR20200D1	Lead (Pb)-free
MBR2040D1-C~MBR20200D1-C	Lead (Pb)-free and Halogen-free

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

Parameter		Symbol	Part Number MBR 2040D1	MBR 2045D1	MBR 2060D1	MBR 20100D1	MBR 20150D1	MBR 20200D1	Unit
Maximum Recurrent Peak Reverse Voltage		V_{RRM}	40	45	60	100	150	200	V
Maximum RMS Voltage		V_{RMS}	28	31.5	42	70	105	140	V
Maximum DC Blocking Voltage		V_{DC}	40	45	60	100	150	200	V
Maximum Average Forward Current see fig.1		$I_{F(AV)}$	20						A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load(JEDEC method)		I_{FSM}	100						A
Maximum Forward Voltage @10A per leg		V_F	0.7		0.8	0.85	0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T_J=25℃	I_R	0.05						mA
	T_J=125℃		20						
Typical Thermal Resistance		$R_{\theta JC}$	6						℃/W
Operating & Storage Temperature		T_J ,T_{STG}	-50~150						℃

RATINGS AND CHARACTERISTIC CURVES

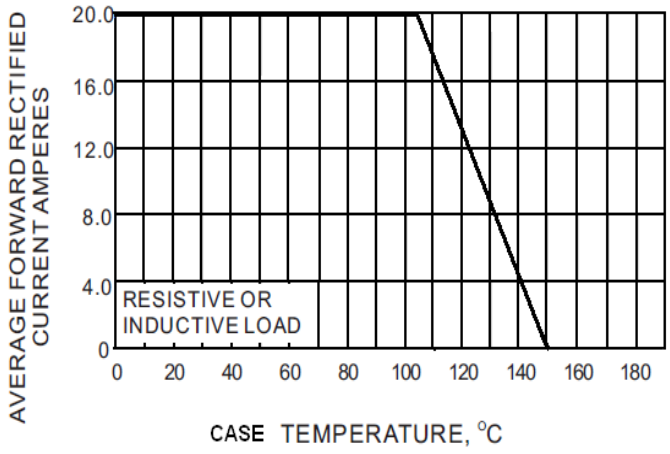


Fig.1- FORWARD CURRENT DERATING CURVE

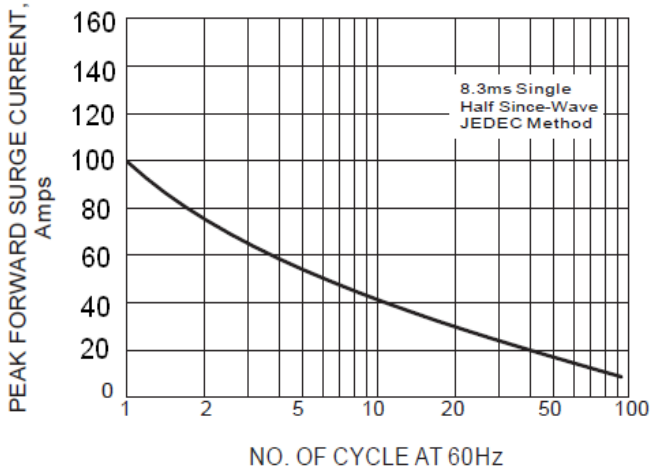


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

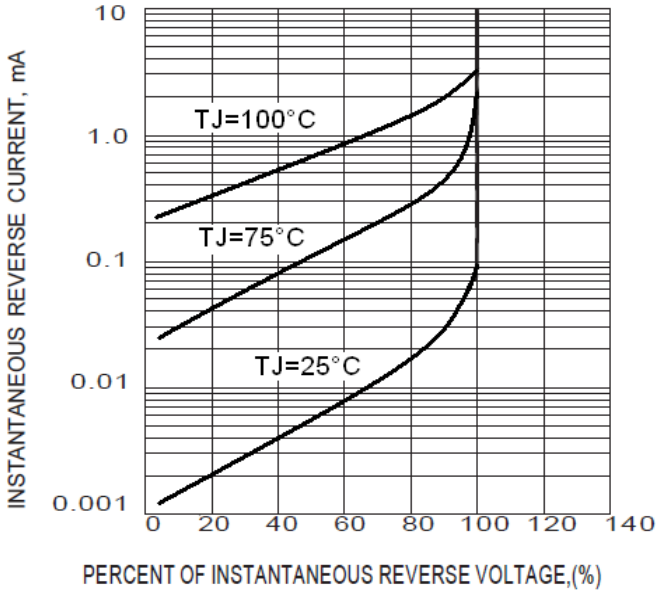


Fig.3- TYPICAL REVERSE CHARACTERISTICS

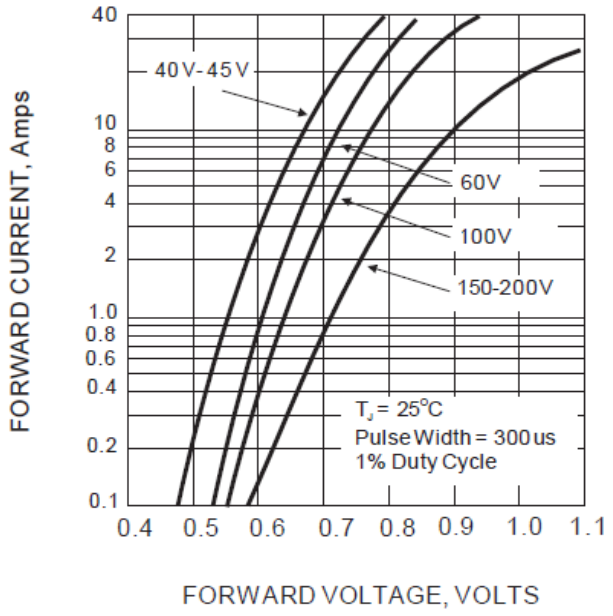


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS